



Monthly Wholesale Trade

Sales and Inventories

December 1997

U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES DECEMBER 1997

Intention to Revise Wholesale Estimates: Monthly wholesale data will be revised based on the results of the 1996 Annual Trade Survey. Unadjusted sales, inventories, and inventories/sales ratios will be revised for January 1993 through February 1998, while corresponding adjusted data will be revised for January 1990 through February 1998. Revised data are scheduled for release May 6.

Sales. December 1997 sales of merchant wholesalers, after adjustment for seasonal variations and trading day differences but not for price changes, were \$212.5 billion, up 0.8 percent (+/- 0.7%) from the revised November level and 3.7 percent (+/- 1.2%) above the December 1996 level. The November preliminary estimate was revised upward by \$0.1 billion or 0.03 percent. Among durable goods, sales of electrical goods were up 5.2 percent from last month, while professional and commercial equipment and supplies increased 3.7 percent from November. December sales of nondurable goods increased 0.7 percent (+/- 0.7%) from last month and were 2.4 percent (+/- 2.0%) above December 1996. Compared to last month, beer, wine, and distilled alcoholic beverages increased 6.5 percent, while petroleum and petroleum products declined 4.2 percent.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$272.5 billion at the end of December, up 0.9 percent (+/- 0.2%) from the revised November level and were 6.4 percent (+/- 1.4%) above December 1996. The November preliminary estimate was revised downward

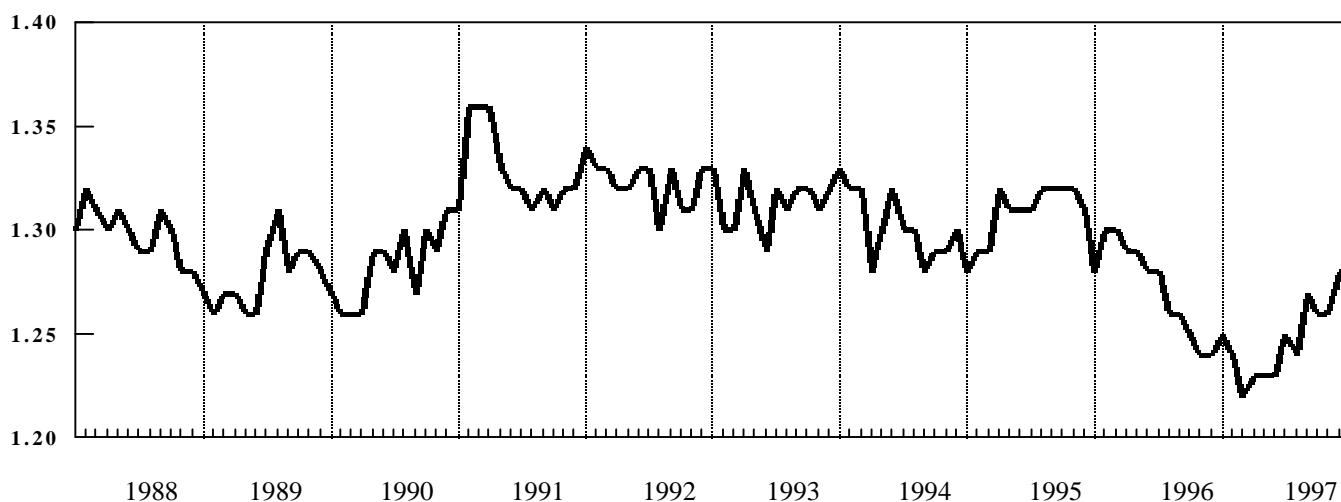
by \$0.6 billion, or 0.2 percent. End-of-month inventories of durable goods wholesalers increased 0.9 percent (+/- 0.3%) from last month and were up 5.7 percent (+/- 1.5%) from December 1996. Inventories of motor vehicles and automotive equipment increased 2.0 percent from November, while lumber and other construction materials fell 4.4 percent. End-of-month inventories of nondurable goods increased 1.0 percent (+/- 0.6%) from last month and were 7.5 percent (+/- 2.3%) above a year ago. Compared to last month, inventories of beer, wine, and distilled beverages rose 2.8 percent, while farm-products raw materials declined 6.7 percent.

Inventory/Sales Ratio. The December inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. The December 1996 ratio was 1.25.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling variability. A discussion of the reliability of the data and general survey methodology appears in BW/96-RV Current Business Report.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1988 to 1997

(Data adjusted for seasonal and trading-day differences, but not for price changes)



Monthly Wholesale Trade for January is scheduled to be released March 11, 1998 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

This report is available on day of issue through the Department of Commerce's online Economic Bulletin Board (202-482-1886). The data are also available on the internet - <http://www.census.gov/svsd/www/mwts.html>.

Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: 1997 and 1996

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Dec. 1997 (p)	Nov. 1997 (r)	Dec. 1996 (r)	Dec./ Nov.	Nov./ Oct.	Dec. 97 Dec. 96	Dec. 1997 (p)	Nov. 1997 (r)	Dec. 1996 (r)	Dec./ Nov.	Nov./ Oct.	Dec. 97 Dec. 96	Dec. 1997 (p)	Nov. 1997 (r)	Dec. 1996 (r)
Adjusted ²																
	U.S. Total	212,531	210,919	204,951	0.8	-0.7	3.7	272,487	270,004	256,178	0.9	0.7	6.4	1.28	1.28	1.25
50	Durable	109,890	109,038	104,731	0.8	-0.9	4.9	170,845	169,338	161,661	0.9	0.2	5.7	1.55	1.55	1.54
501	Automotive	17,619	18,316	18,146	-3.8	-3.1	-2.9	28,276	27,719	26,618	2.0	-1.7	6.2	1.60	1.51	1.47
502	Furniture	3,598	3,536	3,687	1.8	-1.9	-2.4	5,255	5,240	5,291	0.3	-0.1	-0.7	1.46	1.48	1.44
503	Lumber	7,190	7,030	7,194	2.3	-2.6	-0.1	7,515	7,864	7,719	-4.4	-0.8	-2.6	1.05	1.12	1.07
504	Prof. equip.	22,948	22,134	19,810	3.7	1.8	15.8	23,703	24,019	22,330	-1.3	-0.5	6.1	1.03	1.09	1.13
505	Metals	9,046	9,113	8,409	-0.7	0.5	7.6	13,779	13,766	12,742	0.1	0.8	8.1	1.52	1.51	1.52
506	Electrical	15,141	14,388	13,640	5.2	-1.9	11.0	24,262	23,923	22,977	1.4	-0.9	5.6	1.60	1.66	1.68
507	Hardware	6,282	6,293	5,923	-0.2	-0.8	6.1	12,413	12,438	12,085	-0.2	1.0	2.7	1.98	1.98	2.04
508	Machinery	16,189	16,164	15,706	0.2	-2.5	3.1	39,314	38,425	35,949	2.3	1.6	9.4	2.43	2.38	2.29
509	Other Durable	11,877	12,064	12,216	-1.6	1.0	-2.8	16,328	15,944	15,950	2.4	2.4	2.4	1.37	1.32	1.31
51	Nondurable	102,641	101,881	100,220	0.7	-0.4	2.4	101,642	100,666	94,517	1.0	1.5	7.5	0.99	0.99	0.94
511	Paper	7,730	7,696	7,115	0.4	-0.3	8.6	9,855	9,723	8,633	1.4	1.7	14.2	1.27	1.26	1.21
512	Drugs	10,606	10,378	8,985	2.2	2.4	18.0	15,708	15,595	13,666	0.7	2.8	14.9	1.48	1.50	1.52
513	Apparel	7,204	6,986	6,819	3.1	-1.3	5.6	13,233	13,205	11,777	0.2	-0.2	12.4	1.84	1.89	1.73
514	Groceries	27,201	27,302	25,840	-0.4	1.3	5.3	17,542	17,792	17,826	-1.4	1.5	-1.6	0.64	0.65	0.69
515	Farm-products	10,194	10,064	10,786	1.3	-11.8	-5.5	10,499	11,249	9,572	-6.7	1.9	9.7	1.03	1.12	0.89
516	Chemicals	4,711	4,614	4,453	2.1	-3.6	5.8	4,908	5,027	4,689	-2.4	1.5	4.7	1.04	1.09	1.05
517	Petroleum	14,146	14,771	16,589	-4.2	1.6	-14.7	5,129	5,107	5,741	0.4	-0.8	-10.7	0.36	0.35	0.35
518	Alcohol	5,122	4,808	4,606	6.5	-2.2	11.2	5,107	4,968	4,962	2.8	1.4	2.9	1.00	1.03	1.08
519	Other Nondur.	15,727	15,262	15,027	3.0	3.7	4.7	19,661	18,000	17,651	9.2	2.1	11.4	1.25	1.18	1.17
Not Adjusted														Sales to date		
	U.S. Total	216,205	200,365	203,259	7.9	-12.3	6.4	272,651	272,472	256,341	0.1	0.9	6.4	2,527,294	2,420,679	
50	Durable	111,148	103,771	103,405	7.1	-13.4	7.5	168,439	168,381	159,406	0.0	-0.1	5.7	1,305,094	1,245,781	
501	Automotive	17,866	17,455	18,019	2.4	-11.7	-0.8	27,258	28,079	25,740	-2.9	0.0	5.9	218,466	211,094	
502	Furniture	3,627	3,508	3,635	3.4	-13.3	-0.2	5,113	5,188	5,153	-1.4	-0.7	-0.8	42,709	43,606	
503	Lumber	6,406	6,425	6,237	-0.3	-20.6	2.7	7,402	7,636	7,611	-3.1	0.7	-2.7	88,061	85,809	
504	Prof. equip.	24,761	20,518	20,801	20.7	-11.7	19.0	23,916	24,235	22,509	-1.3	-0.4	6.3	256,368	231,360	
505	Metals	8,567	8,284	7,745	3.4	-14.0	10.6	13,972	13,381	12,920	4.4	-0.3	8.1	105,968	98,441	
506	Electrical	14,808	14,129	13,149	4.8	-13.9	12.6	23,801	23,636	22,540	0.7	-0.6	5.6	178,081	173,762	
507	Hardware	6,043	6,060	5,585	-0.3	-15.1	8.2	12,301	12,276	11,976	0.2	0.2	2.7	75,579	70,516	
508	Machinery	16,837	14,677	15,847	14.7	-16.3	6.2	38,724	38,118	35,374	1.6	0.6	9.5	193,301	187,311	
509	Other Durable	12,233	12,715	12,387	-3.8	-9.1	-1.2	15,952	15,832	15,583	0.8	-1.3	2.4	146,561	143,882	
51	Nondurable	105,057	96,594	99,854	8.8	-11.1	5.2	104,212	104,091	96,935	0.1	2.6	7.5	1,222,200	1,174,898	
511	Paper	7,830	7,134	7,015	9.8	-13.4	11.6	10,092	9,917	8,840	1.8	2.9	14.2	89,337	82,655	
512	Drugs	11,391	9,849	9,326	15.7	-11.3	22.1	16,148	15,751	14,062	2.5	2.1	14.8	119,661	102,854	
513	Apparel	5,857	6,602	5,428	-11.3	-20.6	7.9	13,273	12,716	11,836	4.4	-2.3	12.1	87,080	75,507	
514	Groceries	28,207	26,701	26,098	5.6	-5.8	8.1	17,752	18,433	18,076	-3.7	-0.9	-1.8	328,719	315,383	
515	Farm-products	11,081	9,833	11,466	12.7	-19.8	-3.4	12,578	13,870	11,505	-9.3	16.0	9.3	118,170	130,158	
516	Chemicals	4,433	4,273	4,083	3.7	-14.1	8.6	4,888	4,957	4,661	-1.4	2.7	4.9	55,985	53,493	
517	Petroleum	14,966	14,003	16,937	6.9	-7.7	-11.6	5,283	5,219	5,896	1.2	-1.8	-10.4	181,555	177,769	
518	Alcohol	5,895	4,784	5,090	23.2	-9.6	15.8	4,714	5,336	4,485	-11.7	-1.0	2.8	57,876	56,363	
519	Other nondur.	15,397	13,415	14,411	14.8	-10.4	6.8	19,484	17,892	17,474	8.9	3.5	11.5	183,817	180,716	

p Preliminary estimate. r Revised.

1 For a full description of the SIC Codes shown above see the "1987 Standard Industrial Classification Manual" or the Current Business Reports

*Combined Annual and Revised Monthly Wholesale Trade" publication.

2 Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for seasonal adjustment factors used.

Table 2. Coefficients of Variation and Standard Error for Sales and Inventories

SIC code	Kind of business	Coefficients of variation for level (x 100)				Standard error for trend				Coefficients of variation for level (x 100)		Standard error for trend
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to Year Estimates		Cumulative sales estimates		Current year cumulative to previous
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	C Y	P Y	year cumulative
		Median	Median	Median	Median	Median	Median	Median	Median			
	U.S. Total	1.0	1.4	1.0	1.4	0.4	0.2	0.8	1.5	1.0	0.7	0.6
50	Durable	2.1	2.2	2.1	2.2	0.7	0.3	1.5	2.3	2.1	1.2	1.2
501	Automotive	4.0	5.4	4.1	5.2	1.2	0.9	3.4	4.0	3.4	2.6	2.3
502	Furniture	5.8	7.3	5.6	7.2	2.4	1.0	4.8	10.4	5.6	4.1	4.0
503	Lumber	4.9	5.5	5.1	5.5	1.3	0.9	4.9	5.5	4.7	2.5	3.8
504	Prof. equip.	5.6	6.7	5.7	6.8	1.4	0.8	4.4	4.8	5.6	3.5	3.4
505	Metals	4.6	9.2	4.5	9.2	1.3	0.7	3.0	10.2	4.4	3.6	2.1
506	Electrical	4.9	4.2	4.8	4.2	1.3	0.5	3.4	2.8	4.7	2.9	2.8
507	Hardware	4.9	4.7	4.9	4.7	1.3	0.5	6.3	4.8	4.6	2.3	3.8
508	Machinery	5.4	4.6	5.6	4.7	1.8	0.5	4.8	5.3	5.3	2.3	4.4
509	Other Durable	4.5	6.7	4.4	6.6	1.6	0.9	2.6	5.9	4.3	3.3	1.8
51	Nondurable	1.9	2.0	1.8	2.1	0.6	0.3	1.3	1.4	1.7	1.1	1.1
511	Paper	3.4	3.7	3.6	3.9	1.0	0.4	3.1	4.2	3.5	5.2	3.8
512	Drugs	5.6	5.1	5.6	5.2	0.5	0.4	3.3	2.2	5.5	4.8	2.9
513	Apparel	5.1	7.8	5.0	7.9	2.3	0.8	4.3	5.6	4.7	3.3	3.0
514	Groceries	3.1	5.1	3.1	4.9	0.8	0.7	2.0	5.0	2.8	2.6	1.6
515	Farm-products	5.4	7.2	5.2	7.0	2.3	1.6	3.2	3.9	4.7	3.5	2.0
516	Chemicals	5.6	5.6	5.7	5.3	1.3	0.6	4.4	3.6	5.6	3.3	3.5
517	Petroleum	5.9	13.9	5.7	14.0	1.0	0.9	3.7	12.4	5.7	4.3	2.9
518	Alcohol	6.4	5.8	6.4	6.1	1.6	1.2	7.8	5.7	6.1	4.6	5.7
519	Other Nondur.	5.9	5.7	5.9	5.7	1.8	1.0	6.4	5.4	5.3	1.3	5.1

Note: The median measures of variability are based on the most recent 12 months of data.

Sample Design and Reliability of Data

There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling.

Sampling errors occur because observations are made on a sample, not on the entire population, and different samples could have led to different estimates. Standard errors and coefficients of variation, as calculated for this report, are measures of sampling variation. The margin of sampling error, as used on page 1, gives a range about the estimate which is a 90% confidence interval. If, for example, the trend estimate is up 1.2% and the standard error is 0.9%, then the margin of sampling error is $\pm 1.65 \times 0.9\%$ or $\pm 1.5\%$, and the 90% confidence interval is -0.3% to $+2.7\%$. If the interval contains 0, it cannot be stated with certainty whether there was an increase or decrease. For monthly level, the coefficient of variation (CV) is given. The resulting confidence interval is the estimated value $\pm 1.65 \times CV \times$ (the estimated value).

Nonsampling errors are usually attributed to many possible sources: (1) coverage error – failure to accurately represent all population units in the sample, (2) inability to obtain information about all

sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of collection or processing, or in imputing for missing or inconsistent data. Coverage error has an effect on the accuracy of estimates for this survey to the extent that the administrative records system, which forms the basis of our survey universe frame, does not contain all legal businesses. A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For all kinds of businesses combined, imputed data amount to about 26 percent of the total monthly wholesale sales estimates and 28 percent of the total monthly wholesale inventories estimates.

Nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

Official Business

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Table 3. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Sales						Inventories					
		1998	1997					1998	1997				
		Jan.	Dec.r	Nov.r	Oct.	Sep.	Dec.r	Jan.	Dec.r	Nov.r	Oct.	Sep.	Dec.r
	U.S. Total¹	0.941	1.018	0.949	1.079	1.024	0.989	1.022	1.002	1.008	1.006	0.978	1.003
50	Durable	0.914	1.009	0.949	1.091	1.055	0.981	0.999	0.986	0.994	0.998	0.994	0.986
501	Automotive	0.911	1.014	0.953	1.046	0.967	0.993	1.016	0.964	1.013	0.996	0.975	0.967
502	Furniture	0.879	1.008	0.992	1.123	1.071	0.986	0.974	0.973	0.990	0.997	1.032	0.974
503	Lumber	0.844	0.891	0.914	1.121	1.070	0.867	0.986	0.985	0.971	0.957	0.981	0.986
504	Prof. equip.	0.967	1.079	0.927	1.068	1.074	1.050	1.015	1.009	1.009	1.008	0.981	1.008
505	Metals	0.968	0.947	0.909	1.062	1.026	0.921	1.012	1.014	0.972	0.983	0.988	1.014
506	Electrical	0.919	0.978	0.982	1.119	1.096	0.964	1.001	0.981	0.988	0.985	1.001	0.981
507	Hardware	0.879	0.962	0.963	1.126	1.092	0.943	0.981	0.991	0.987	0.995	1.003	0.991
508	Machinery	0.920	1.040	0.908	1.058	1.011	1.009	0.989	0.985	0.992	1.002	0.985	0.984
509	Other Durable	0.876	1.030	1.054	1.171	1.110	1.014	0.985	0.977	0.993	1.030	1.028	0.977
51	Nondurable	0.970	1.024	0.946	1.066	0.998	0.993	1.060	1.030	1.033	1.022	0.954	1.031
511	Paper	0.997	1.013	0.927	1.067	1.036	0.986	1.023	1.024	1.020	1.008	0.967	1.024
512	Drugs	1.017	1.074	0.949	1.096	1.033	1.038	1.079	1.028	1.010	1.016	0.990	1.029
513	Apparel	0.906	0.813	0.945	1.175	1.126	0.796	1.041	1.003	0.963	0.983	1.011	1.005
514	Groceries	0.979	1.037	0.978	1.052	0.997	1.010	1.005	1.012	1.036	1.062	1.014	1.014
515	Farm-products	1.085	1.087	0.977	1.074	0.949	1.063	1.293	1.198	1.233	1.083	0.714	1.202
516	Chemicals	0.955	0.941	0.926	1.039	0.991	0.917	0.990	0.996	0.986	0.974	0.979	0.994
517	Petroleum	1.031	1.058	0.948	1.043	0.972	1.021	0.988	1.030	1.022	1.033	1.016	1.027
518	Alcohol	0.787	1.151	0.995	1.077	0.990	1.105	0.935	0.923	1.074	1.100	1.052	0.924
519	Other Nondur.	0.858	0.979	0.879	1.018	0.975	0.959	1.052	0.991	0.994	0.980	0.919	0.990



r Revised

¹ Adjusted sales and inventories data shown in table 1 are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding group. Adjusted data for the totals are obtained by adding the durable and nondurable goods. Seasonal factors shown for the totals will provide an approximation of the adjusted estimates, but may show small differences from the published data.

Note: The seasonal factors shown have been computed based on monthly estimates through the current month preliminary estimates.